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<p>(21) International Application Number: PCT/US99/19624</p> <p>(22) International Filing Date: 26 August 1999 (26.08.99)</p> <p>(30) Priority Data: 09/140,352 26 August 1998 (26.08.98) US</p> <p>(71) Applicant (<i>for all designated States except US</i>): TRUSTEES OF TUFTS COLLEGE [US/US]; 136 Harrison Avenue, Boston, MA 02111 (US).</p> <p>(72) Inventors; and (75) Inventors/Applicants (<i>for US only</i>): WALT, David, R. [US/US]; 4 Candlewick Close, Lexington, MA 02178 (US). DICKINSON, Todd, A. [US/US]; Apartment 1133, 3435 Lebon Drive, San Diego, CA 92122 (US).</p> <p>(74) Agents: BREZNER, David, J. et al.; Flehr Hohbach Test Albritton & Herbert LLP, Suite 3400, 4 Embarcadero Center, San Francisco, CA 94111-4187 (US).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 8 June 2000 (08.06.00)</p>	
<p>(54) Title: COMBINATORIAL POLYMER SYNTHESIS OF SENSORS FOR POLYMER-BASED SENSOR ARRAYS</p> <p>(57) Abstract</p> <p>A combinatorial synthesis method for fabricating unique families of discrete copolymer sensors and copolymer gradient sensors is provided. The method employs combinatorial copolymer synthesis of discrete monomer or oligomer combinations as well as spatially-varying combinations for generating large numbers of analyte-discriminating sensors from a limited selection of initial monomer and oligomer compositions. The method can be applied to either analyte-specific sensors or sensor arrays or semi-selective sensors and cross-reactive sensor arrays which employ virtually any known physicochemical transduction mechanism for detecting analytes. Since the analyte response characteristics of such copolymer sensors are not limited to a linear proportional ratio of the monomer or oligomer combinations employed, the resulting copolymer sensors provide for increased diversity in sensor and sensor array response characteristics for discriminating between a variety of materials and for detecting and identifying analytes in fluid samples.</p>			

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/19624

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N21/64 G01N21/77

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>WO 99 00663 A (DOLEMAN BRETT ; SANNER ROBERT (US); GRUBBS ROBERT H (US); LEWIS NAT) 7 January 1999 (1999-01-07) page 10, line 29 -page 11, line 9 claims 1,176</p> <p>-----</p> <p>-/-</p>	1,3,5-7, 9,11-14

Further documents are listed in the continuation of box C.

Parent family members are listed in annex.

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Date of the actual completion of the International search

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C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	M C LONERGAN: "ARRAY-BASED VAPOR SENSING USING CHEMICALLY SENSITIVE, POLYMER COMPOSITE RESISTORS" IEEE AEROSPACE APPLICATIONS CONFERENCE. PROCEEDINGS, XX, XX, no. 3, 8 February 1997 (1997-02-08), pages 583-631, XP002078726 page 587, left-hand column, paragraph 3 -right-hand column, paragraph 2 page 590, left-hand column, paragraph 3 -right-hand column, paragraph 2	1,7,13
Y		3-6, 9-12,14
Y	US 5 244 636 A (WALT DAVID R ET AL) 14 September 1993 (1993-09-14) cited in the application column 4, line 53 -column 7, line 9 column 10, line 44 - line 56	3-6, 9-12,14
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A	DICKINSON T A ET AL: "GENERATING SENSOR DIVERSITY THROUGH COMBINATORIAL POLYMER SYNTHESIS" ANALYTICAL CHEMISTRY, US, AMERICAN CHEMICAL SOCIETY, COLUMBUS, vol. 69, no. 17, 1 September 1997 (1997-09-01), pages 3413-3418, XP000720847 ISSN: 0003-2700 cited in the application page 3414, left-hand column, paragraph 3 -page 3417, right-hand column, paragraph 3	1,3,5-7, 9,11-14

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date		
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